



PATENT

Attorney Docket No. RES2000.14A

Applicant: MARK S. FRATER  
Serial No.: 09/945,125  
Filed: AUGUST 30, 2001  
Title: LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS  
Group:  
Examiner:

**BOX NON FEE  
ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231**

#### INFORMATION DISCLOSURE STATEMENT

##### List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this Information Disclosure Statement:

1.  Preliminary Statements
2.  FORM PTO-1449 (Modified)
3.  Statement As To Information Material To Examination Not Found In Patents Or Publications
4.  Identification Of Prior Application In Which Listed Information Was Already Cited And For Which No Copies Are Submitted Or Need Be Submitted
5.  Cumulative Patents or Publications
6.  Copies of Listed Information Items Accompanying This Statement
7.  Concise Explanation of Non-English Language Listed Information Items
8.  Translation(s) of Non-English Language Documents
9.  Identification of Person(s) Making This Information Disclosure Statement

**Section 1. Preliminary Statements**

Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR 1.56.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 CFR 1.56(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

**Section 2. PTO Form 1449 (modified)**

FORM 1449 IS BEING SUBMITTED HEREWITH IN 6 PAGE(S).

**Section 3. Statement As To Information Material To Examination Not Found In Patents Or Publications (Information not listed in PTO-1449)**

1. THE APPLICANT IS THE PRESIDENT OF R.E. SERVICE CO. (RES). IN JULY 1996, RES SOLD A LAMINATE FOR MAKING PRINTED CIRCUIT BOARDS COMPRISING A SHEET OF COPPER BONDED TO A SHEET OF STAINLESS STEEL APPROXIMATELY 5 MILS THICK, USING GAPPED ADHESIVE DEPOSITS POSITIONED ALONG THE PERIMETER OF THE LAMINATE INTERIOR OF THE EDGE. THE CTE OF THE STAINLESS STEEL WAS APPROXIMATELY 9.8. IN MAY/JUNE 1997, RES FIRST SOLD A SIMILAR PRODUCT COMPRISING A SHEET OF COPPER BONDED TO A SHEET OF NICKEL PLATED CARBON STEEL USING GAPPED ADHESIVE DEPOSITS POSITIONED ALONG THE PERIMETER OF THE LAMINATE INTERIOR OF THE EDGE. THE CTE OF THE CARBON STEEL WAS APPROXIMATELY 7.2. BOTH PRODUCTS HAD A SURFACE FINISH (ROUGHNESS) OF 17 RMS OR GREATER.
2. IN THE 1987-1988 TIME FRAME, RES SOLD CARBON STEEL TO ZYCON CORPORATION SO THAT ZYCON CORPORATION COULD MOVE AWAY FROM USING 0.062 INCH STAINLESS STEEL SHIMS. THE CARBON STEEL WAS APPROXIMATELY 0.025 TO 0.030 INCHES THICK, WAS NOT PLATED, AND WAS REUSABLE. ZYCON CORPORATION IN TURN USED THAT CARBON STEEL AS SEPARATOR IN WHICH COPPER SHEETS WERE ATTACHED TO THE SEPARATOR BY THE USE OF MAGNETS IN THE CORNERS. CARBON STEEL WAS USED BECAUSE STAINLESS STEEL WAS NOT MAGNETIC. THE MAGNETS WERE PULLED OUT BEFORE THE LAMINATE WAS PLACED IN THE PRESS. BECAUSE THE CARBON STEEL WAS PRONE TO CORROSION, ZYCON SPRAYED THE CARBON STEEL WITH A FREECOAT RELEASE AGENT PRIOR TO LAMINATION TO RESIST CORROSION. THE PLATES WERE THEN CLEANED AND RESPRAYED PRIOR TO REUSE.

**Section 4. Identification of Prior Application in Which Listed Information Was Already Cited and For Which No Copies Are Submitted Or Need Be Submitted**

**Note:** "A copy of any patent, publication or other information listed in an information disclosure statement is not required to be provided if it was previously cited by or submitted to the Office in a prior application, provided that the prior application is properly identified in the statement and relied upon for an earlier filing date under 35 U.S.C. 120." 37 CFR 1.98(d).

**WARNING:** While a copy of a non-English language item of information need not be submitted if it was previously submitted to or cited by the Office in a prior application, provided it is properly identified in this statement and this application relies on that earlier filing date under 35 U.S.C. 120, nevertheless, the requirement in § 1.98(a)(3) for a concise explanation of non-English language information would not be satisfied by a statement that a reference was cited in the prosecution of a parent application. The concise explanation must explain the relevance as presently understood by the person designated in § 1.56(c) most knowledgeable about the content of the information. Notice of January 9, 1992, 1135 O.G. 13-25, at 20.

**Section 5. Cumulative Patents or Publications**

NOTE: "When the disclosure of two or more patents or publications listed in an information disclosure statement are substantially cumulative, a copy of one of the patents or publications maybe submitted without copies of the other patents or publications provided that a statement is made that these other patents or publications are cumulative." 37 CFR 1.98(c).

**STATEMENT**

\_\_\_\_\_ is cumulative of the following patents or publications listed on Form PTO-1449  
(modified):

In accordance with 37 CFR 1.98(c) a copy of only \_\_\_\_\_ is being submitted with this  
information disclosure statement.

**Section 6. Copies of Listed Information Items Accompanying This Statement**

NOTE: 37 CFR 1.98(a)(2) requires that any information disclosure statement filed under § 1.97 shall include: "A legible copy of: (i) Each U.S. and foreign patent; (ii) Each publication or that portion which caused it to be listed; and (iii) All other information or that portion which caused it to be listed, except that no copy of a U.S. patent application need be included ..."

NOTE: The wording in § 1.98(a)(2)(iii) makes it clear that the requirement to submit a copy of each item of information listed in an information disclosure statement does not apply to the citation of a U.S. patent application. Notice of January 9, 1992, 1135 O.G. 13-25, at 14.

Legible copies of all items listed accompany this information disclosure statement.

**Exception(s) to above**

- Items in prior application from which an earlier filing date is claimed for this application as identified in Section 4.
- Cumulative patents or publications identified in Section 5.

It is respectfully stipulated, however, that none of these references teach or render obvious, singly or when considered in combination, applicant's claimed invention. This citation does not constitute an admission that the references are relevant or material to the claims nor that a search has been made; the references are cited only as constituting the closest art of which the applicant is aware.

**Section 7. Concise Explanation of Non-English Language Listed Information Items**

NOTE: "A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the information of each patent, publication, or other information listed that is not in the English language shall be included in any information disclosure statement filed under § 1.97. "The concise explanation may be either separate from the specification or incorporated therein." 37 CFR 1.98(a)(3).

NOTE: "[T]he explanation required is limited to the relevance as understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information at the time the information is submitted to the Office." Notice of January 9, 1992, 1136 O.G. 13-25, at 14.

NOTE: "Where the information listed is not in the English language, but was cited in a search report by a foreign patent office, the requirement for a concise explanation of relevance is satisfied by submitting an English language version of the search report." Notice of January 9, 1992, 1136 O.G. 13-25, at 14.

NOTE: "The concise explanation requirement for non-English language information may be met by submission of an English language version of the search report indicating the degree of relevance found by the foreign office." Notice of January 9, 1992, 1136 O.G. 13-25, at 20.

WARNING: "The requirement in §1.98(a)(3) for a concise explanation of non-English information would not be satisfied by a statement that a reference was cited in the prosecution of a parent application." Notice of January 9, 1992, 1136 O.G. 13-25, at 20 (emphasis added).

**JA NO. 2-291191 DISCLOSES A SUBSTRATE MADE BY LAMINATING METAL FOIL ON ONE SIDE OR BOTH SIDES OF A HEAT RESISTING PLASTIC FILM WITH THERMOSETTING ADHESIVE, SETTING THE ADHESIVE, AND SURFACE TREATING THE LAMINATED METAL SURFACE BY LOW TEMPERATURE PLASMA OF INORGANIC GAS.**

**JA NO. 2-310041 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE.**

**JA NO. 2-58885 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE.**

**JA NO. 52-5353 DISCLOSES COPPER FOIL HAVING ALUMINUM FOIL FIRMLY ADHERED TO ITS UPPER SURFACE LAPPED ONTO A BASE PLATE, AND COPPER POWDER DISPERSED ON THE ALUMINUM FOIL TO GIVE A SPECIFIED COPPER DENSITY. THE COMPOSITE IS THEN TREATED BY HEATING AND PRESSING.**

**JA NO. 62-208915 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE.**

**JA NO. 4-186798 DISCLOSES A MULTILAYER PRINTED CIRCUIT BOARD.**

**DE NO. 28 43 263 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE HAVING A SHEET FOR USE AS A BLANK FOR A PRINTED CIRCUIT BOARD CONSISTING OF A CARRIER PLATE ON WHICH A COPPER LAYER HAS BEEN APPLIED, THE COPPER LAYER HAVING A LIGHT RESISTANT COATING TO PROTECT THE COPPER LAYER, AND AN ALUMINUM LAYER.**

**DE NO. 31 31 688 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE.**

**EP NO. 299-454 DISCLOSES A MULTILAYERED LAMINATE STRUCTURE WITH ADHESIVE BONDED LAYERS.**

**THE FOLLOWING TWO (2) REFERENCES ARE NOT IN ENGLISH, BUT THE ENGLISH LANGUAGE VERSION OF THE RELEVANT SEARCH REPORT IS SUBMITTED INDICATING THE DEGREE OF RELEVANCE FOUND BY THE FOREIGN OFFICE. (PCT/US99/07795)**

**DE NO. 41 18 543 DISCLOSES A MULTILAYERED COPPER FOIL ADDED LAMINATE STRUCTURE.**

**DE 297 19 716 U DISCLOSES A MULTILAYERED LAMINATE STRUCTURE.**

**Section 8. Translation(s) of Non-English Language Documents**

**NOTE:** "If a written English language translation of a non-English language document, or portion thereof is within the possession, custody or control of, or is readily available to any individual designated in § 1.56(c), a copy of the translation shall accompany the statement." 37 CFR 1.98(c).

**NOTE:** "The Office does not intend to require translations unless they have been reduced to writing and are actually translations of what is contained in non-English language information. Applicants should note, however, that most examiners do not have the ability to understand information which is not English and the Office will not routinely translate information submitted in a non-English language. The examiner will consider the information insofar as it is understood on its face, e.g., drawings, chemical formulas, English-language abstracts, but will not have the information translated unless it appears to be necessary to do so. Applicants are required to aid the examiner by complying with the requirements of a concise explanation in § 1.98(a)(3) for information submitted in a non-English language." Notice of January 9, 1992, 1135 O.G. 13-25, at 21.

- No English language translations of the foreign language patents, publications or information or parts thereof are readily available, except for those listed above.
- The following foreign language documents submitted are believed to be the equivalent or substantial equivalent of the English language documents identified below, which are also submitted herewith.
- Submitted herewith is an English language translation of the following foreign patents, publications or information or of those portions of those patents, publications or information considered to be material:

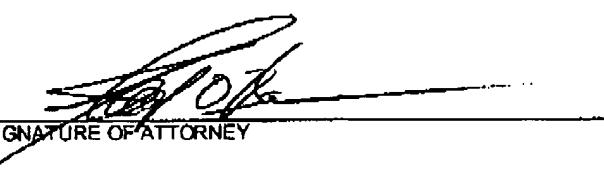
**Section 9. Identification of Person(s) Making This INFORMATION DISCLOSURE STATEMENT**

The person making this statement is the attorney who signs below on the basis of:

the information supplied by the inventor(s)  
 the information in the attorney's file

Dated: 10/6/01

Reg. No.: 33,201

  
SIGNATURE OF ATTORNEY

Tel. No.: (916) 498-1010

John P. O'Banion  
O'BANION & RITCHEY LLP  
400 Capitol Mall, Suite 1550  
Sacramento, CA 95814

<b>CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)</b> Applicant(s): <b>MARK S. FRATER</b>			Docket No. <b>RES2000.14A</b>
Serial No. <b>09/945,125</b>	Filing Date <b>AUGUST 30, 2001</b>	Examiner	Group Art Unit
Invention: <b>LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS</b>			
<p>I hereby certify that this <u>Information Disclosure Statement (Page 1 thru 10)</u> (Identify type of correspondence)</p> <p>is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on <u>10/16/01</u> (Date)</p> <p><b>JOHN P. O'BANION</b> (Typed or Printed Name of Person Mailing Correspondence)  (Signature of Person Mailing Correspondence)</p>			
<p><b>Note: Each paper must have its own certificate of mailing.</b></p>			

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*
ATTY DOCKET NO.  
RES2000.1SERIAL NO.  
09/945,125

MARK S. FRATER

FILING

AUGUST 30, 2001

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	RE 29,820	10/1978	Konicek			
	2,688,348	09/1954	Sullivan			
	2,706,165	04/1955	Korsgaard			
	2,774,698	12/1956	Jenk et al.			
	3,589,975	06/1971	Andrews et al.			
	3,592,722	07/1971	Morgan			
	3,647,592	03/1972	Woodberry			
	3,730,825	05/1973	Nakane			
	3,808,088	04/1974	Knechtges et al.			
	3,932,250	01/1976	Sato et al.			
	3,936,548	02/1976	Konicek			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	2-291191	11/1990	JA				✓
	2-310041	12/1990	JA				✓
	2-58885	02/1990	JA				✓
	52-5353	02/1977	JA				✓
	62-208915	09/1987	JA				✓

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		Pohl et al., "PRODUCING AND JOINTLY PROCESSING BASE LAMINATES FOR MULTILAYER PRINTED CIRCUIT CARDS," IBM Technical Disclosure Bulletin, Vol. 27, No. 8, pp. 4841-4842, January, 1985.
		DECLARATION OF ROBERT JORDAN, United States District Court, Northern District of California, San Jose Division, Case No. C92-20672 JW (PVT), November 25, 1992.

EXAMINER	DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*
ATTY DOCKET NO.  
RES2000.14SERIAL NO.  
09/945,125**MARK S. FRATER**

FILING

AUGUST 30, 2001

GROUP

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	3,948,701	04/1976	Fashender et al.			
	3,984,598	10/1976	Sarazin et al.			
	3,990,926	11/1976	Konicek			
	4,022,648	05/1977	Woodberry et al.			
	4,023,998	05/1977	Cederberg et al.			
	4,092,925	06/1978	Fromson			
	4,113,576	09/1978	Hutkin			
	4,179,324	12/1979	Kirkpatrick			
	4,180,608	12/1979	Del			
	4,311,419	01/1982	Block			
	4,351,873	09/1982	Davis			

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	4-186798	07/1992	JA				✓
	28 43 263	02/1980	DE				✓
	31 31 688	05/1982	DE				✓
	0 212 124	03/1987	EP				
	0 235 582	09/1987	EP				

**OTHER DOCUMENTS** *(including Author, Title, Date, Pertinent Pages, Etc.)*

		DECLARATION OF GLYNN SHAW, United States District Court, Northern District of California, San Jose Division, Case No. C92 20672 JW (PVT), November 30, 1992.
		DECLARATION OF ALAN GISHI, United States District Court, Northern District of California, San Jose Division, Case No. C92 20672 JW (PVT), December 7, 1992

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)			ATTY DOCKET NO. RES2000.1		SERIAL NO. 09/945,125		
			MARK S. FRATER				
			FILING AUGUST 30, 2001	GROUP			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		4,357,395	11/1982	Lifshin et al.			
		4,381,327	04/1983	Briere			
		4,383,003	05/1983	Lifshin et al.			
		4,394,419	07/1983	Konicek			
		4,446,188	05/1984	Patel et al.			
		4,455,181	06/1984	Lifshin et al.			
		4,568,413	02/1986	Toth et al.			
		4,587,152	05/1986	Gleichenhagen et al.			
		4,715,116	12/1987	Thorpe et al.			
		4,722,765	02/1988	Ambros et al.			
		4,775,599	10/1988	Matsuoka et al.			
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES      NO
		299 454	01/1989	EP			✓
		41 16 543 A	11/1992	DE			✓
		297 19 716 U	12/1997	DE			✓
		0 411 142 A	02/1991	EP			
		1 217 104 A	12/1970	GB			
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
		MEMORANDUM TO THE ASSISTANT COMMISSIONER OF PATENTS. Response to Petition for Public Use Proceeding Under 37 CFR 1.292, Ser. No. 07/955,121, United States Patent and Trademark Office, pp. 3-4, December 8, 1994.					
		EXAMINER'S ACTION, Ser. No. 07/955,121, United States Patent and Trademark Office, pp. 7-8, July 11, 1996.					
EXAMINER			DATE CONSIDERED				
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*
ATTY DOCKET NO.  
RES2000.14xxSERIAL NO.  
09/945,125

MARK S. FRATER

FILING

AUGUST 30, 2001

GROUP

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4,781,495	11/1998	Hatch et al.			
	4,781,969	11/1988	Kobayashi et al.			
	4,788,102	11/1988	Koning et al.			
	4,847,146	07/1989	Yeh et al.			
	4,853,273	08/1989	Harris, Jr.			
	4,872,934	10/1989	Kameda			
	4,875,283	10/1989	Johnston			
	4,929,370	05/1990	Hatch et al.			
	4,961,806	10/1990	Gerrle et al.			
	5,030,302	07/1991	Jud et al.			
	5,057,372	10/1991	Imfeld et al.			

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	0 872 301 A	10/1998	EP				

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

			Hinton, P., "THE HIGH-YIELD CHALLENGE IN LAMINATING MLBS," Electronic Packaging and Production, Vol. 30, No. 1, pp. 56-61, January, 1990.

EXAMINER	DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE CITATION**  
*(Use several sheets if necessary)*
ATTY DOCKET NO.  
**RES2000.1xx**SERIAL NO.  
**09/945,125****MARK S. FRATER**

FILING

**AUGUST 30, 2001**

GROUP

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	<b>5,096,522</b>	03/1992	Kawachi et al.			
	<b>5,120,590</b>	06/1992	Savage et al.			
	<b>5,153,050</b>	10/1992	Johnston			
	<b>5,350,621</b>	09/1994	Yuhas et al.			
	<b>5,407,744</b>	04/1995	Herero et al.			
	<b>5,512,381</b>	04/1996	Konicek et al.			
	<b>5,674,596</b>	10/1997	Johnston			
	<b>5,716,168</b>	02/1998	Janoff			
	<b>5,725,937</b>	03/1998	Johnston			
	<b>5,789,066</b>	08/1998	De Mare et al.			
	<b>5,951,803</b>	09/1999	Johnston			

**FOREIGN PATENT DOCUMENTS**

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

**OTHER DOCUMENTS** *(Including Author, Title, Date, Pertinent Pages, Etc.)*


EXAMINER	DATE CONSIDERED
----------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)				Docket Number (Optional) <b>RES2000.1xx</b>	Application Number <b>09/945,125</b>		
				Applicant(s) <b>MARK S. FRATER</b>			
				Filing Date <b>AUGUST 30, 2001</b>	Group Art Unit		
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		5,997,983	12/1999	Caron et al.			
		6,127,051	10/2000	Frater			
		6,129,990	10/2000	Frater			
		6,129,998	10/2000	Frater			
		6,130,000	10/2000	Frater			
<b>FOREIGN PATENT DOCUMENTS</b>							
REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						YES	NO
<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER				DATE CONSIDERED			
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

**EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)

Applicant(s): MARK S. FRATER

Docket No.

RES2000.14A

Serial No.  
09/945,125Filing Date  
AUGUST 30, 2001

Examiner

Group Art Unit

Invention: LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS

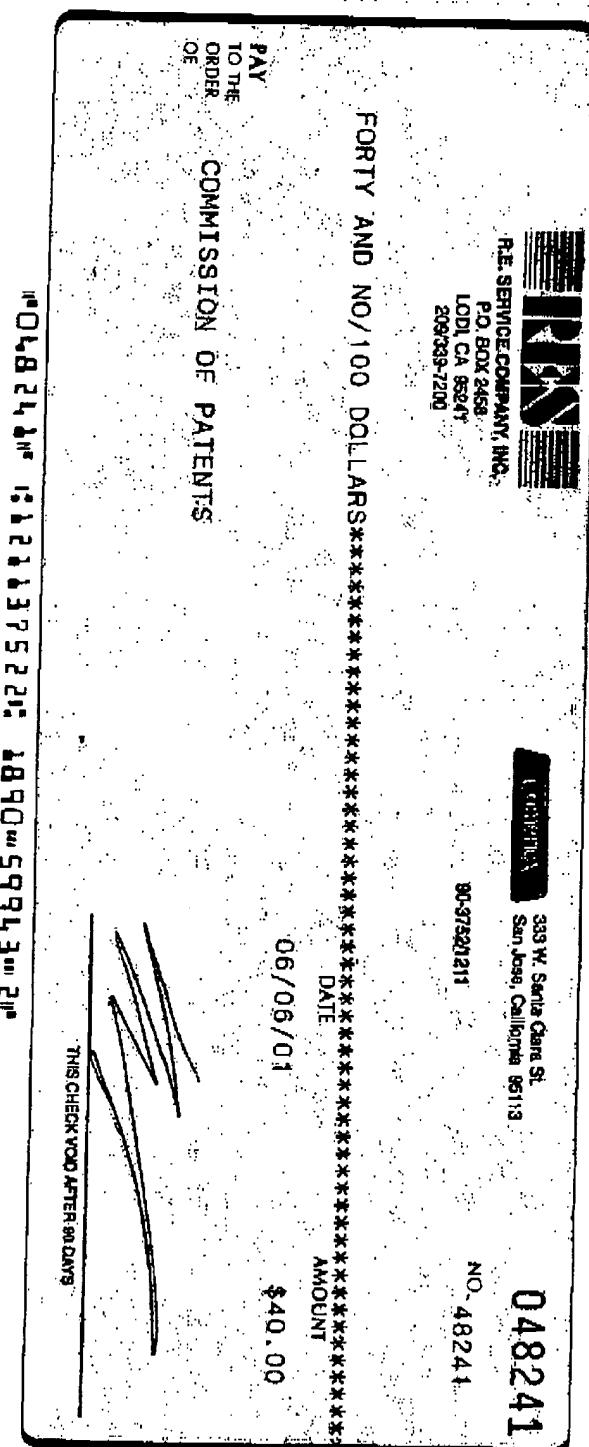
I hereby certify that this PTO-1449 (Page 1 thru 6)*(Identify type of correspondence)*is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The  
Assistant Commissioner for Patents, Washington, D.C. 20231 on10/6/01  
*(Date)*

JOHN P. O'BANION

*(Typed or Printed Name of Person Mailing Correspondence)**(Signature of Person Mailing Correspondence)*

Note: Each paper must have its own certificate of mailing.

<b>CERTIFICATE OF MAILING BY FIRST CLASS MAIL (37 CFR 1.8)</b>				Docket No. RES2000.14A
Applicant(s): MARK S. FRATER				
Serial No. 09/945,125	Filing Date AUGUST 30, 2001	Examiner	Group Art Unit	
Invention: LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS				
<p>I hereby certify that this <u>Citations (83)</u> <small>(Identify type of correspondence)</small> is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The Assistant Commissioner for Patents, Washington, D.C. 20231 on <u>10/26/01</u> <small>(Date)</small></p> <p><b>JOHN P. O'BANION</b> <small>(Typed or Printed Name of Person Mailing Correspondence)</small></p> <p><small>(Signature of Person Mailing Correspondence)</small></p>				
<p><b>Note: Each paper must have its own certificate of mailing.</b></p>				



**PATENT**Attorney Docket No. RES2000.14A

Applicant: MARK S. FRATER  
Serial No.: 09/945,125  
Filed: AUGUST 30, 2001  
Title: LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS  
Group:  
Examiner:

**ASSIGNMENT (DOCUMENT) COVER LETTER****PATENT OR PATENT APPLICATION****1. NAMES OF PARTY(IES) MAKING TRANSFER**

Name 1: MARK S. FRATER

**2. IDENTITY OF PARTY(IES) TO WHOM TRANSFER IS MADE**

This transfer is being made to:

Name: R.E. SERVICES, INC.  
Address: 400 SOUTH BECKMAN ROAD  
LODI, CALIFORNIA 95240

**3. INTENTION OF DOCUMENT**

A brief description of what the accompanying document intends to accomplish is that it is an:

- Assignment
- License
- Security Interest
- Other

**4. IDENTIFICATION OF PATENT OR APPLICATION**

Particulars of the patent or application to which the accompanying document applies are:

Inventor(s):

MARK S. FRATER

For (title):

LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT  
BOARDS

- (a)  U.S. patent application filed herewith.
- (b)  U.S. patent application serial no. 09/945,125 filed on AUGUST 30, 2001.
- (c)  U.S. patent no. \_\_\_\_\_ issued \_\_\_\_\_.

**5. NAME AND ADDRESS TO WHICH CORRESPONDENCE SHOULD BE MAILED**

Please address all correspondence and return the recorded document to:

John P. O'Banion  
O'BANION & RITCHIEY LLP  
400 Capitol Mall, Suite 1550  
Sacramento, CA 95814

**6. NUMBER OF APPLICATIONS OR PATENTS IDENTIFIED AND TOTAL FEE DUE**

The number of applications or patents identified herein is: 1

Total Fee Due \$ 40.00

**7. DATE DOCUMENT WAS EXECUTED**

The accompanying document was executed on September 23, 2001.

**8. FEE PAYMENT**

Fee payment is provided for as follows:

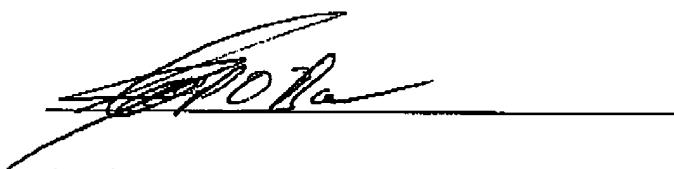
- New Application transmittal (Item 18 - INCLUDED IN FILING FEE)
- FWC Transmittal (Item VIII)
- Transmittal of Filing under 37 CFR 1.60(b) (Item 11)
- Attached is a check in the sum of \$40.00
  - Charge Account No. 07-1137 if any additional fee is due.
  - Charge Account No. \_\_\_\_\_ In the sum of \_\_\_\_\_ A duplicate of this transmittal is attached.

**9. STATEMENT OF AUTHENTICITY**

The undersigned certifies that, to the best of his or her knowledge and belief, the information contained in this cover sheet is true and correct, and any copy of the document submitted for recording is a true copy of the original document.

**10. SIGNATURE**

Dated:

10/16/01

John P. O'Banion, Reg. No. 33,201  
O'BANION & RITCHEY LLP  
400 Capitol Mall, Suite 1550  
Sacramento, CA 95814  
(916) 498-1010

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Page 3 of 3

## PATENT

Attorney Docket No.: RES2000.14A

## ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR(S).

Name: **MARK S. FRATER**  
Address: **9556 SPRINGFIELD WAY**  
**STOCKTON, CA 95212**

Nationality: **UNITED STATES**

hereby sell(s), assign(s) and transfer(s) to ASSIGNEE:

Name: **R.E. SERVICE COMPANY, INC.**  
Address: **400 SOUTH BECKMAN ROAD**  
**LODI, CALIFORNIA 95240**

and the successors, assigns and legal representatives of the ASSIGNEE the entire right, title and interest for the United States and its territorial possessions and in all foreign countries, including all rights to claim priority, in and to any and all improvements which are disclosed in the invention entitled:

**LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS**

and which is found in

- (a)  U.S. provisional patent application filed herewith and listing the above named person(s) as inventor(s).
- (b)  U.S. patent application filed herewith listing the above named person(s) as inventor(s).
- (c)  U.S. patent application serial no. 09/945,125, filed on AUGUST 30, 2001.
- (d)  U.S. Patent No.: \_\_\_\_\_, issued \_\_\_\_\_.

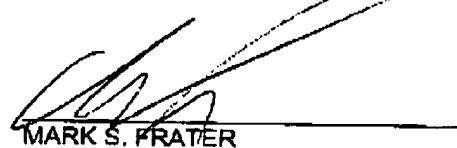
and any legal equivalent thereof in a foreign country, including the right to claim priority and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, continuation-in-part, extension or substitute thereof, and any reissue, reexamination or extension of said Letters Patent and all rights under all International Conventions for the Protection of Industrial Property;

ASSIGNOR(S) hereby covenant(s) that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

ASSIGNOR(S) further covenant(s) that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said Invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation, or proceeding relating thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue or enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof. An attorney of record is authorized and requested by the execution of this assignment to insert into this assignment the filing date and serial number of said application when officially known.

AND the ASSIGNOR(S) request(s) the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States and any reissue or extension thereof to the ASSIGNEE.

Date: 9-23-01 Inventor:



MARK S. PRATER

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL. (37 CFR 1.8)**Applicant(s): **MARK S. FRATER**

Docket No.

**RES2000.14A**Serial No.  
**09/945,125**Filing Date  
**AUGUST 30, 2001**

Examiner

Group Art Unit

Invention: **LAMINATED ENTRY AND EXIT MATERIAL FOR DRILLING PRINTED CIRCUIT BOARDS**

I hereby certify that this Assignment Cover Letter and Assignment (Page 1 thru 5)  
(Identify type of correspondence)

is being deposited with the United States Postal Service as first class mail in an envelope addressed to: The  
Assistant Commissioner for Patents, Washington, D.C. 20231 on 20/6/01

(Date)

**JOHN P. O'BANION**

(Typed or Printed Name of Person Mailing Correspondence)

(Signature of Person Mailing Correspondence)

**Note: Each paper must have its own certificate of mailing.**

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